BREAKING ADVANCES

6377 Highlights from Recent Cancer Literature

REVIEWS

6379 Decoding the Histone Code: Role of H3K36me3 in Mismatch Repair and Implications for Cancer Susceptibility and Therapy
Guo-Min Li

6384 Real-time Liquid Biopsy in Cancer Patients: Fact or Fiction?
Klaus Pantel and Catherine Alix-Panabières

MEETING REPORT

6389 The Hippo Tumor Suppressor Network: From Organ Size Control to Stem Cells and Cancer
Georg Halder and Fernando D. Camargo

PRIORITY REPORT

6393 Erythropoietin Activates Cell Survival Pathways in Breast Cancer Stem-like Cells to Protect Them from Chemotherapy
Matilde Todaro, Alice Turdo, Monica Bartucci, Flora Iovino, Rosanna Dattilo, Marco Biffoni, Giorgio Stassi, Giulia Federici, Ruggero De Maria, and Ann Zeuner

MICROENVIRONMENT AND IMMUNOLOGY

GM-CSF Promotes the Immunosuppressive Activity of Glioma-Infiltrating Myeloid Cells through Interleukin-4 Receptor-α
Gary Kohanbash, Kayla McKaveney, Masashi Sakaki, Ryo Ueda, Arlan H. Mintz, Nduka Amankulor, Mitsugu Fujita, John R. Ohi, and Hideho Okada

Précis: These findings reveal the operation of immunosuppressive mechanisms in the glioblastoma microenvironment driven by GM-CSF, a factor used in the clinic to elevate white blood cell counts in patients, suggesting clinical risks arising from its use.

Substance P Autocrine Signaling Contributes to Persistent HER2 Activation That Drives Malignant Progression and Drug Resistance in Breast Cancer
Susana García-Recio, Gemma Fuster, Patricia Fernandez-Nogueira, Eva M. Pastor-Arroyo, So Yeon Park, Cristina Mayordomo, Elisabet Ametller, Mario Mancino, Xavier Gonzalez-Farre, Hege G. Russnes, Pablo Engel, Domiziana Costamagna, Pedro L. Fernandez, Pedro Gascón, and Vanessa Almendro

Précis: This work illuminates the oncogenic cooperation between HER2 and a substance P receptor involved in pain signaling, providing a novel link between cancer inflammation and progression that might be targeted by substance P antagonists being explored in the clinic.

MOLECULAR AND CELLULAR PATHOBIOLOGY

miR-153 Supports Colorectal Cancer Progression via Pleiotropic Effects That Enhance Invasion and Chemotherapeutic Resistance

Précis: MicroRNAs that facilitate progression and mediate drug resistance in advanced cancers have increased appeal as treatment targets, given the more frequent lack of effective therapies at late stages of disease.

INTEGRATED SYSTEMS AND TECHNOLOGIES

6401 A Transcriptional and Metabolic Signature of Primary Aneuploidy Is Present in Chromosomally Unstable Cancer Cells and Informs Clinical Prognosis
Jason M. Sheltzer

Précis: Chromosomal instability in cancer cells is associated with a transcriptional stress response that has prognostic significance in various types of human malignancy.
### THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY

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<td>6448</td>
<td>Mutationally Activated PIK3CA&lt;sup&gt;H1047R&lt;/sup&gt; Cooperates with BRAF&lt;sup&gt;V600E&lt;/sup&gt; to Promote Lung Cancer Progression</td>
<td>Christy L. Trejo, Shon Green, Victoria Marsh, Eric A. Collisson, Gioia Iezza, Wayne A. Phillips, and Martin McMahon</td>
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<td>6494</td>
<td>Antitumor Efficacy of a Monoclonal Antibody That Inhibits the Activity of Cancer-Associated Carbonic Anhydrase XII</td>
<td>Gabor Gondi, Josef Myśliwietz, Alzbeta Hulikova, Jian Ping Jen, Pawel Swietach, Elisabeth Kremmer, and Reinhard Zeidler</td>
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**Précis:** These findings deepen the in vivo evidence that MAPK and PI3K signaling cooperates in mediating the development and progression of KRAS-mutated lung cancer, suggesting combination therapies to treat this disease.

### TUMOR AND STEM CELL BIOLOGY

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<td>6504</td>
<td>MYC Phosphorylation at Novel Regulatory Regions Suppresses Transforming Activity</td>
<td>Amanda R. Wayshishen, Michelle Chan-Seng-Yue, Christina Rios, Dharmendra Dingar, William B. Tu, Manpreet Kalkat, Pak-Kei Chan, Peter J. Mullen, Ling Huang, Natalie Meyer, Brian Raught, Paul C. Boutros, and Linda Z. Penn</td>
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<td>6516</td>
<td>TIG1 Promotes the Development and Progression of Inflammatory Breast Cancer through Activation of Axl Kinase</td>
<td>Xiaoping Wang, Hitomi Saso, Takayuki Iwamoto, Weiya Xia, Yun Gong, Lajos Pusztai, Wendy A. Woodward, James M. Reuben, Steven L. Warner, David J. Bearss, Gabriel N. Hortobagyi, Mien-Chie Hung, and Naoto T. Ueno</td>
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**Précis:** These findings provide key new insights into the molecular pathobiology of the most aggressive form of breast cancer, rationalizing the Axl receptor signaling pathway as a therapeutic target for treatment of this lethal disease.

### CORRECTION

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<td>6538</td>
<td>Correction: Breast Tumor Kinase (Brk/PTK6) Is a Mediator of Hypoxia-Associated Breast Cancer Progression</td>
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miR-153 leads to increased invasiveness in colorectal cancer. Using mouse tumor xenografts, it was found that colorectal tumors with inhibition of miR-153 show a clean edge of tumor spheroid and fewer invasive fronts into the surrounding stroma (magnification, ×400) in contrast to controls with a more locally invasive tumor phenotype. For details, see article by Zhang and colleagues on page 6435.
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